

LENBRASSIA (GESNERIACEAE)  
A NEW GENUS ENDEMIC TO NORTH QUEENSLAND

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THE LATE C. T. WHITE, in describing *Coronanthera australiana*, the sole Australian representative of *Coronanthera* and of the tribe Coronanthereae, remarked: "If when better known the plant is found to bear definitely fleshy, indehiscent fruit, then it may have to form the basis for a new genus." White confirmed this possibility by a collection made only a few months later (*White 10548*, Sept. 1936), showing that the species was indeed characterized by a fleshy fruit. In 1967, in the publication in this journal (48: 245) of a new species of *Coronanthera* indigenous to the Solomon Islands, I remarked that the genus was not to be considered indigenous to Australia because the alleged representative was, according to White, characterized by fleshy fruit. This situation would mandate the exclusion of *C. australiana* not only from the genus *Coronanthera*, but also from the tribe Coronanthereae, characterized by capsular fruit and wind-dispersed seed.

During August, 1973, it was possible for me to carry out field studies in the rain forest of North Queensland and to make an ample collection of *Coronanthera australiana*, at that time in flower and fruit. The field work confirms White's observation that this species (FIGURE 1) has a fleshy fruit. This character and the larger, cylindrical corolla, do indeed make it a strongly discordant element in the Coronanthereae.

A perhaps closer relationship for this monotypic Queensland endemic would be with the genus *Fieldia*, indigenous to South Queensland, New South Wales, and Victoria, and the Australian representative of the South American tribe Mitrarieae (*Sarmienta*, *Asteranthera*, *Mitraria*). At the same time, the coherent anthers, borne on twisted filaments, and the arborescent habit alienate it from *Fieldia*. It appears, therefore, that the most reasonable interpretation of this different, attractive element is as a separate genus in the tribe Mitrarieae. This lends emphasis to an interesting although not unusual pattern of phytogeographic relationship, with three genera of the tribe indigenous to southern South America and two genera in eastern Australia.

The name chosen for the new genus, *Lenbrassia*, is in commemoration of Leonard Brass, whose prodigious botanical explorations in the Southwest Pacific have played a significant role in the advancement of the botany of that area.

*Lenbrassia* G. W. Gillett, gen. nov.

Propter fructum carnosum et corollam majorem cylindricam Tribui Mitrariearum propter antheras cohaerentes generi Asteranthereae affinis.

TYPE SPECIES: *L. australiana*.

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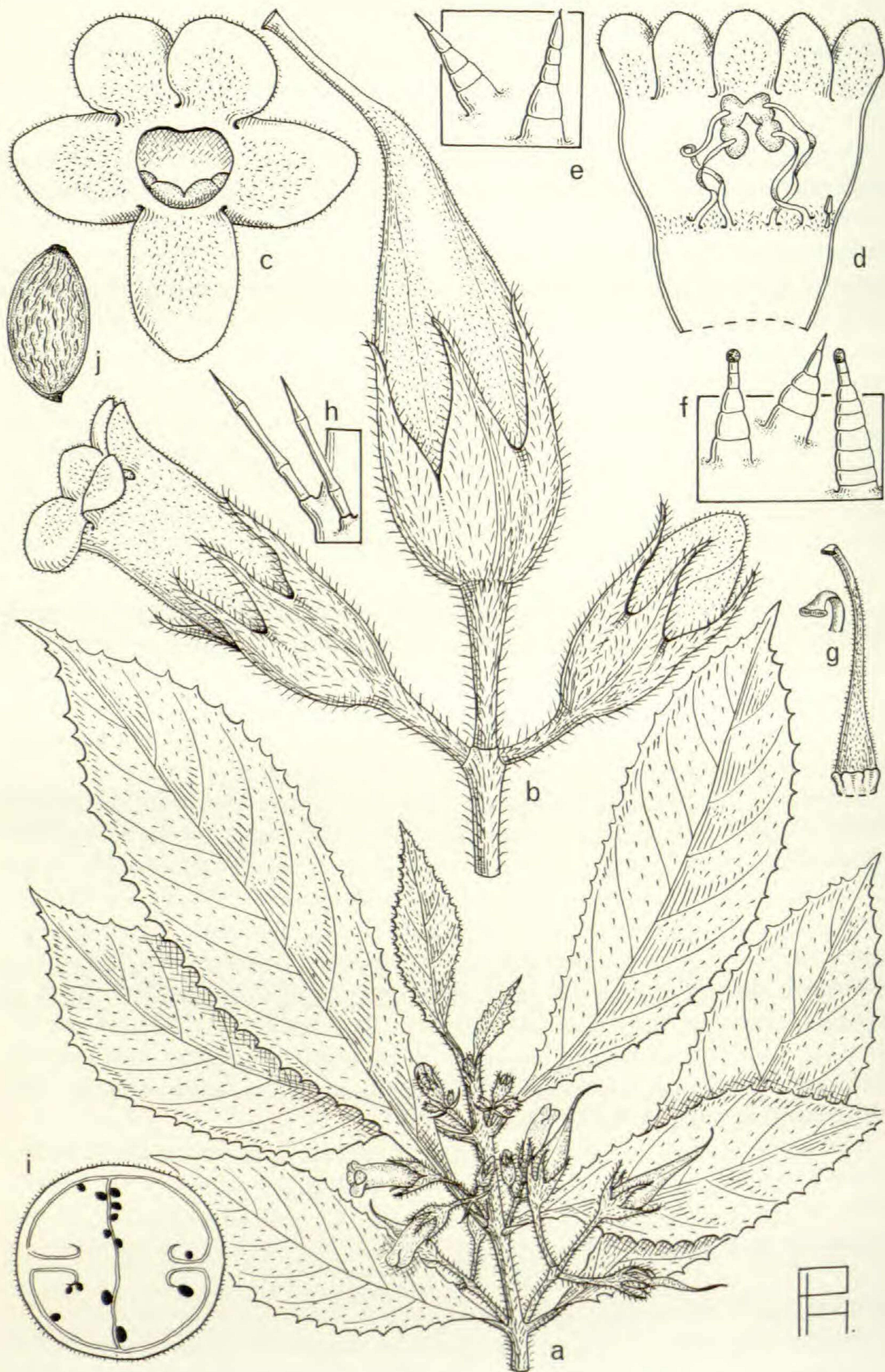


FIGURE 1. *Lenbrassia australiana*: a, habit,  $\times 2/3$ ; b, inflorescence,  $\times 2$ ; c, flower,  $\times 3$ ; d, opened corolla (anterior lobe in center),  $\times 2$ ; e, hairs from the outer surface of the corolla,  $\times 60$ ; f, hairs from the inner surface of the corolla,



*Lenbrassia australiana* (C. T. White) G. W. Gillett, comb. nov.  
FIGURE 1.

*Coronanthera australiana* C. T. White, Proc. Roy. Soc. Queensland 47(5): 73.  
1936.

*Habit* a branching tree up to 13 m. high, with hard, strong wood, the buds and young foliage purple, turning green with maturity. *Indument* of light brown, nonglandular hairs 50–100  $\mu\text{m}$ . in basal diameter and 0.5–1.0 mm. long. *Leaves* opposite with a scabrous pubescence on the upper and lower surfaces, the petioles 0.5–2.0 cm. long, the blades lanceolate to oblanceolate, 2.5–5.5 cm. broad and 5–15 cm. long, the primary veins 7–9 per side and curved acropetally along the margins of the blade, the secondary and tertiary veins obscure above and below, the blades unequal and acute to cuneate at bases, acute to acuminate at apices, sharply serrate, with narrow, evenly spaced teeth about 1–1½ per cm. at margins. *In-florescences* scabrous, cymose, of 1–3 flowers, the axillary peduncles 0.5–1.5 cm. long, terminated by a pair of deciduous, linear bracts 3–8 mm. long, the bracts subtending 1–3 pedicels 0.5–1.5 cm. long. *Calyx* persistent, the tube clasping the base of the mature fruit, the calyx 10–12 mm. long, cleft 2/3 of its length into 5 equal to subequal, subterete, linear-acuminate lobes, the calyx scabrous on the outer and inner surfaces with nonglandular hairs, the outer hairs erect, 50–100  $\mu\text{m}$ . in basal diameter and 0.5–1.0 mm. long, the inner hairs much smaller, 20–30  $\mu\text{m}$ . in basal diameter and 100–200  $\mu\text{m}$ . long, acropetally inclined on the tube, erect on the lobes. *Corolla* tangerine orange, cylindrical, pubescent on the outer and inner surfaces with erect, nonglandular hairs 20–30  $\mu\text{m}$ . in diameter and 100–150  $\mu\text{m}$ . long, the corolla 18–20 mm. long, cleft 2–4 mm. into 5 unequal, rounded lobes, the 2 posterior lobes shorter. *Stamens* 4, borne as 2 lateral pairs, the 4 anthers coherent at apices, the filaments 9–10 mm. long, pubescent near apices with small, nonglandular hairs, the filaments twisted and curved, adnate to the corolla tube 5 mm. above its base and 12 mm. below the sinuses of each of the two lateral lobes, the 4 anthers at early anthesis raised to the posterior wall of the corolla tube, displaying the pollen prior to the elongation of the style, at late anthesis lowered against the anterior wall of the tube, concealing the pollen. *Staminode* glabrous, 2 mm. long, comprised of a short filament and rudimentary anther, the filament adnate to the corolla 6 mm. above the base of the tube and 11–12 mm. below the sinus of the posterior lobes. *Ovary and style* 15–16 mm. long at late anthesis, pubescent with small, erect, nonglandular hairs, the ovary tapering uniformly, concavely, into the style, the placentation parietal, the glabrous, cupulate annular disc wholly adnate to the base of the ovary as a swollen rim 0.5 mm. high. *Stigma* glabrous, spatulate, truncate, entire. *Fruit* fleshy, light green, shiny, pubescent, 2.0–2.5 cm. long, obclavate, tipped by 0.75–1.25 cm. of the persistent style base.

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× 60; g, gynoecium, × 2; h, hairs from the style, × 40; i, cross section of fruit, × 3; j, seed, × 40. Drawn from *Gillett 2606*.



*Seeds* ovoid, brown, 0.6–0.7 mm. long, the coats with longitudinal striations.

**TYPE LOCALITY.** Mt. Demi, North Queensland, 760 m., in rain forest. Holotype collected by Brass, cited below.

**DISTRIBUTION.** Upland rain forest in North Queensland, between the latitudes of Mossman and Cape Tribulation, 760–1250 m.

**Queensland:** Mt. Spurgeon, *Merrotsy* 27 (BRI, K), *C. T. White* 10548 (BRI, K); Mt. Demi, *Brass* 2087 (BRI-holotype); Mt. Misery, *Balgooy* 1594 (BRI, K, UC); between Mt. Lewis and Mt. Demi, *Gillett* 2606 (A, BRI, E, K, L, UC); Mt. Lewis, *L. S. Smith* 10099 (BRI); Thornton Peak, *Brass & White* 220 (BRI, K).

The population represented by *Gillett* 2606 occurs as well dispersed, small trees in the understory of a very dense rain forest that grows on decomposed granite, on steep topography. The area is at 1050 m., northwest of Mt. Lewis and near the boundary between the South Mary and North Mary logging areas, along the Mt. Lewis logging road. The population occurs on the slopes above (west of) the road. This road joins the Mt. Malloy — Mossman road about 18 miles southwest of Mossman and 1–2 miles west of Julatten. This population, or possibly a series of disjunct populations, extend along the east side of the Great Dividing Range from Mt. Spurgeon to Mt. Lewis, for a distance of about 30 km. The genus also occurs in a second region, about 30 km. to the east, east of the Daintree River, in the Thornton Range. It is not known elsewhere.

Associated genera of the Mt. Lewis — Mt. Demi population (*Gillett* 2606) include: *Syzygium*, *Angophora*, *Flindersia*, *Bubbia*, *Pullea*, *Austrobaileya*, *Scaevola*, *Orania*, *Linospadix*, *Cyathea*, etc.

The orientation of the stamens in the flowers of *Lenbrassia* would promote outcrossing. The protandrous anthers display the pollen at early anthesis along the access route to the nectary and well above the non-receptive stigma. At later anthesis, the thecae are depressed against the anterior wall of the corolla (FIGURE 1d), the residual pollen isolated and concealed from the elongating style and stigma, now displayed along the access route for the optimal reception of pollen from other flowers.

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